

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of routing a message from a source node to a destination node in ~~a an-adhoc-wireless~~ network comprising a plurality of nodes, the method comprising: the steps of;

transmitting a first message from the source node to the destination node,

receiving said first message at said destination node,

transmitting a second message from said destination node in response to the first message and,

wherein at least one of said first message and said second message is sent between the source and destination nodes via a plurality of paths, wherein at least one of the plurality of paths comprises ~~comprising~~ at least one intermediate node,

selecting a path from the plurality of paths for communication between the source node and the destination node based at least in part on a propagation delay of the path, ~~wherein the propagation delay is a using an indication of the time taken for at least one of said~~ second message and said first message[[s]] to propagate between each node on ~~each~~ the path.

2. (Currently Amended) A method of routing a message as claimed in claim 1, ~~wherein the indication of the time taken for at least one of the first and second messages to propagate between each node on the path is provided~~ propagation delay is obtained at least in part by time stamping the at least one of the first and second message ~~at the time when the at least one of the first and second message is transmitted [[at]]~~ from each node on the path.

3. (Currently Amended) A method of routing a message as claimed in claim 1, ~~wherein the indication of the time taken for the at least one of the first and second messages to propagate between each node on the path is provided~~ propagation delay is obtained at least

in part by time stamping the at least one of the first and second messages ~~at the time when the~~
at least one of the first and second messages is received at each node on the path.

4. (Currently Amended) A method of routing a message as claimed in claim 1,
~~wherein the indication of the time taken for the at least one of the first and second messages~~
~~to propagate between each node on the path is given~~ propagation delay is obtained by
calculating ~~the~~ an actual time taken for the at least one of the first and second messages to
propagate between each node and storing the calculated actual times taken in the at least one
of the first and second messages.

5. (Currently Amended) A method of routing a message as claimed in claim 4 wherein
the method comprises ~~the step of:~~ summing the calculated actual times taken stored in the at
least one of the first and second messages in order to determine the propagation delay. ~~time~~
~~taken for the at least one of the first and second messages to propagate between the source~~
~~node and the destination node.~~

6. (Canceled)

7. (Currently Amended) A method as claimed in claim 5, comprising ~~the step of~~
comparing the ~~calculated time taken for the at least one of the first and second messages to~~
~~propagate between the source node and the destination node~~ propagation delay to a
transmission duration, wherein the transmission duration comprises a ~~the~~ time between
transmitting the at least one of the first and second messages from either the source or
destination node and receiving the at least one of the first and second messages at either the
source ~~the source~~ or destination node.

8. (Currently Amended) A method of routing a message in accordance with claim 1
further comprising: ~~the step of;~~

measuring ~~the~~ a signal quality of the at least one of the first and second messages at
each node on the path; and

selecting ~~[[a]]~~ the path for communication between the source node and the
destination node based at least in part on ~~using~~ the measured ~~the~~ signal quality.

9. (Currently Amended) A method as claimed in claim 8, comprising ~~the step of~~ storing the measured signal quality ~~measurement~~ in the at least one of the first and second messages.

10. (Currently Amended) A method of routing a message in accordance with claim 1 further comprising: ~~the step of;~~

calculating ~~the~~ a distance between each node; and

selecting ~~[[a]]~~ the path for communication between the source node and the destination node based at least in part on using the calculated distance.

11. (Currently Amended) A method as claimed in claim 10, comprising ~~the step of~~ storing the calculated distance in the at least one of said first and second messages.

12. (Currently Amended) A method of routing a message in accordance with claim 1 further comprising: ~~the step of;~~

calculating ~~the~~ a velocity of the at least one intermediate node ~~of said nodes; and~~

selecting ~~[[a]]~~ the path for communication between the source node and the destination node using based at least in part on the calculated velocity ~~of at least one of said nodes.~~

13. (Currently Amended) A method as claimed in claim 1 further comprising: ~~the steps of~~

measuring power attributes of the at least one intermediate node; and ~~of said nodes;~~

selecting ~~[[a]]~~ the path for communication between the source node and the destination node based at least in part on using said measured power attribute.

14. (Currently Amended) A method as claimed in claim 1 further comprising: ~~the step of~~

assessing ~~the~~ a link stability of the plurality of paths; and ~~between said plurality of~~
nodes;

selecting ~~[[a]]~~ the path for communication between the source node and the
destination node ~~using~~ based at least in part on said assessed link stability.

15. (Currently Amended) A method as claimed in claim 1, further comprising ~~the step~~
of assessing ~~the~~ a required Quality of Service of at least one of the first message and the
second message; and

selecting ~~[[a]]~~ the path~~[--]~~ for communication between the source node and the
destination node based at least in part on the required quality of service.

16. (Currently Amended) A method as claimed in claim 1 comprising ~~the steps of~~:
measuring ~~the~~ a first position of the at least one intermediate node ~~nodes~~ at a first
time;

measuring ~~the~~ a second position of the at least one intermediate node ~~nodes~~ at a
second time;

calculating ~~the~~ a velocity of the at least one intermediate node ~~nodes~~ using the first
position and the second position; ~~from the position measurements~~;

storing the calculated velocity ~~velocities~~ in the at least one of the first and second
messages; and

selecting ~~[[a]]~~ the path for communication between the source node and the
destination node based at least in part on using said stored velocity ~~velocities~~.

17. (Currently Amended) The method as claimed in claim 1 wherein a routing
algorithm uses a~~[[n]]~~ priority value to weight a parameter which is used for selecting ~~[[a]]~~ the
path for communication between the source node to the destination node.

18. (Currently Amended) A method as claimed in claim 1, wherein a routing algorithm uses a mapping value that indicates ~~the~~ a degree to which a measured parameter value meets a predefined parameter value.

19. (Currently Amended) A method as claimed in claim 1, wherein said network is an ad hoc wireless network.

20. (Currently Amended) A method as claimed in claim 1, wherein the at least one intermediate node ~~of said nodes~~ is a mobile station.

21. (Currently Amended) An ad hoc wireless network comprising:

a plurality of nodes wherein a source node is arranged to transmit a first message to a destination node, said destination node is arranged to receive ~~the~~ said first message, said destination node is arranged to transmit a second message in response to said first message; and;

at least one intermediate node ~~[[is]]~~ arranged to transmit at least one of said first message and said second message via a plurality of paths; and ~~[[,]] said network further comprising~~

selecting means configured arranged to select a path from ~~at least one of~~ said plurality of paths for communication between said source node and said destination node based at least in part on a propagation delay of the path, wherein the propagation delay is a ~~using an indication of the time taken for at least one of said second and first messages to propagate between each node on each~~ the path.

22. (Currently Amended) An ad hoc network as claimed in claim 21, further comprising wherein means to time stamp the at least one of the first and second messages is provided at each node.

23. (Currently Amended) An ad hoc network as claimed in claim 21 wherein each node on the path comprises ~~processing means to calculate the actual time taken for the~~ at least

~~one of said first and second messages to propagate between each node and to store the~~
~~calculated time~~ propagation delay in the at least one of the first and second messages.

24. (Currently Amended) An ad hoc network claimed in claim 21 further comprising:

means to measure ~~the~~ a signal quality of the at least one of the first and second messages;

wherein said selecting means is further ~~arranged~~ configured to select ~~[[a]]~~ the path for communication between the source node and the destination node based at least in part on ~~using~~ said measured signal quality.

25. (Currently Amended) An~~[[,]]~~ ad hoc network as claimed in claim 21 comprising:

processing means to calculate ~~the~~ a distance between each node; and

wherein said selecting means is further configured to ~~arranged for selecting~~ ~~[[a]]~~ the path for communication between the source node and the destination node based at least in part on ~~using~~ the calculated distance.

26. (Currently Amended) An ad hoc network as claimed in claim 21 comprising:

processing means for calculating ~~the~~ a velocity of the at least one intermediate node ~~of~~ ~~said nodes~~; and

wherein said selecting means is further configured to ~~arranged for selecting~~ ~~a~~ the path for communication between the source node and the destination node based at least in part on ~~using~~ the calculated velocity.

27. (Currently Amended) An ad hoc network as claimed in claim 21 further comprising:

means to measure power attributes of ~~the~~ at least one intermediate node; ~~of said~~ ~~nodes~~; and

wherein said selecting means is configured ~~further arranged~~ to select a the path for communication between the source node and the destination node based at least in part on using said measured power attributes.

28. (Currently Amended) An ad hoc network as claimed in claim 21 further comprising:

means to assess ~~the~~ a link stability of the plurality of paths ~~between said plurality of nodes~~; and

wherein said selecting means is further configured ~~arranged~~ to select ~~[[a]]~~ the path for communication between the source node and the destination node based at least in part on using said assessed link stability.

29. (Currently Amended) An ad hoc network as claimed in claim 21 comprising:

means to assess ~~the~~ a required quality of service; and

wherein said selecting means is further ~~arranged for~~ configured to selecting ~~a~~ the path for communication between the source node and the destination node based at least in part on the required quality of service.

30. (Currently Amended) An ad hoc network as claimed in claim 21, wherein:

said selecting means is ~~arranged~~ configured to select a plurality of candidate routes;

said network further comprises ~~comprising~~ mapping means for mapping said plurality of candidate routes to a plurality of quality of service classes; and

wherein said selecting means is further configured ~~arranged~~ to select ~~[[a]]~~ the path from ~~one of~~ said plurality of candidate routes such that the path is mapped to a required quality of service.

31. (Currently Amended) A node in an ad hoc wireless network, said ad hoc network comprising a plurality of nodes, said node comprising:

means for receiving and transmitting at least one of a plurality of messages sent on a plurality of communication paths from a source node to a destination node;

means for indicating ~~the~~ a first time that said at least one message is received at the node; and

means for indicating ~~the~~ a second time that said at least one message is transmitted from the node; and

means for storing the first time and the second time in a metrics field of the at least one message such that a propagation delay of the at least one message can be determined, wherein the propagation delay is an amount of time that the at least one message is in between nodes as the at least one message travels from the source node to the destination node.

32. (Currently Amended) A node as claimed in claim 31, wherein: the means for indicating the first time and the second time ~~said message is received and transmitted~~ are provided by time stamping the at least one message.

33. (Canceled)

34. (Currently Amended) A node as claimed in claim 31 further comprising means for calculating the an amount of time for said at least one message to propagate from a second node ~~another of said plurality of nodes~~ to said node using an indication of a third time at which the at least one message is transmitted from the second node and the indication of the first time at which the at least one message is received at the node. ~~the indication of time said message is received and transmitted.~~

35. (Currently Amended) A node as claimed in claim 31 further comprising means for calculating ~~the~~ a distance between the node and a second node based at least in part on the indication of the first time at which the at least one message is received at the node and an indication of a third time at which the at least one message is transmitted from the second node. ~~said plurality of nodes using the indication of time said message is received and transmitted.~~

36. (Currently Amended) A node as claimed in claim 31, further comprising selecting means to select a path from said plurality of communication paths on which to transmit ~~and/or receive messages~~ based at least in part on the propagation delay. ~~using said calculated time.~~